



Critical issues in the development of health information systems in supporting environmental health: A case study of ciguatera

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Abstract:

BACKGROUND: Emerging environmental pressures resulting from climate change and globalization challenge the capacity of health information systems (HIS) in the Pacific to inform future policy and public health interventions. Ciguatera, a globally common marine food-borne illness, is used here to illustrate specific HIS challenges in the Pacific and how these might be overcome proactively to meet the changing surveillance needs resulting from environmental change. **OBJECTIVES:** We review and highlight inefficiencies in the reactive nature of existing HIS in the Pacific to collect, collate, and communicate ciguatera fish poisoning data currently used to inform public health intervention. Further, we review the capacity of existing HIS to respond to new data needs associated with shifts in ciguatera disease burden likely to result from coral reef habitat disruption. **DISCUSSION:** Improved knowledge on the ecological drivers of ciguatera prevalence at local and regional levels is needed, combined with enhanced surveillance techniques and data management systems, to capture environmental drivers as well as health outcomes data. **CONCLUSIONS:** The capacity of public HIS to detect and prevent future outbreaks is largely dependent on the future development of governance strategies that promote proactive surveillance and health action. Accordingly, we present an innovative framework from which to stimulate scientific debate on how this might be achieved by using existing larger scale data sets and multidisciplinary collaborations.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3094406>

Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Health Professional, Policymaker

Exposure :

weather or climate related pathway by which climate change affects health

Climate Change and Human Health Literature Portal

Food/Water Quality

Food/Water Quality: Biotoxin/Algal Bloom

Geographic Feature: 

resource focuses on specific type of geography

Ocean/Coastal

Geographic Location: 

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact: 

specification of health effect or disease related to climate change exposure

Other Health Impact

Other Health Impact: Ciguatera

Intervention: 

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status, Workers

Other Vulnerable Population: Subsistence fishers

Resource Type: 

format or standard characteristic of resource

Review

Resilience: 

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: 



time period studied

Time Scale Unspecified